

NETWORKS

DEVOLO dLAN Wireless Extender Starter Kit

★★★

£109 inc VAT

Devolu's HomePlug devices have let people use mains power sockets to connect their computers together for a number of years now. In buildings where it's inconvenient to run network cables, HomePlugs let you take advantage of the power lines to transmit data between any sockets in the same building.

The new Wireless Extender Starter Kit adds WiFi to the mix, in effect allowing you to extend the range of your wireless router to places that were previously out of range. This could be far-flung rooms in a house with thick brick walls, or a shed at the bottom of the garden. Alternatively, you can use the kit to create a wireless network if your router doesn't already have WiFi.

In this starter kit you'll find two plugs: a standard dLAN HomePlug adaptor capable of 85Mbit/s and a Wireless 802.11g (54Mbit/s) HomePlug adaptor. This adaptor also has a standard Ethernet port should you want to connect a device that doesn't have WiFi – you can use the network socket and the wireless capabilities at the same time.

Setup is as simple as finding two free power sockets: one in the room where your router is, and the other in the room where you want the wireless network to be. Devolu recommends that you don't use sockets in power strips as this can reduce transfer speeds. You can encrypt the data sent between the two plugs by keying the unique codes printed on each of them into



Devolu's configuration wizard. This stops people in adjoining houses being able to join your network. The plugs will automatically locate each other and establish a connection. The setup wizard also launches a browser window to show the access point's management interface. Here you can set passwords, restrict access by MAC address and set WEP or WPA/WPA2 passwords. You can also switch from access point mode to WiFi client mode, in order to make it log on to a wireless router to gain wireless internet access, for example.

In our tests, the speed varied according to which sockets we used, and you may find that speeds are faster or slower depending on your wiring. Using a standard Centrino WiFi laptop, we recorded a speed of 10Mbit/s at 1m, while at 10m it dropped to 6Mbit/s.

£109 is a lot to pay for this kind of performance, but if a long Ethernet cable isn't an option, the Wireless extender could be the answer to your network problems.

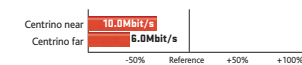
Jim Martin

SUMMARY

- ✓ Flexible network support
- ✗ Confusing to configure
- ✗ Expensive

POWERLINE NETWORKING One HomePlug 85Mbit/s Ethernet adaptor, one HomePlug 54Mbit/s WiFi and Ethernet adaptor **PART CODE** 1215
SUPPLIER www.morecomputers.com
DETAILS www.devolu.co.uk

PERFORMANCE (see page 62)



FAQ

Q What type of network cable should I use?

A For most home networking, CAT5 cables are the most cost effective. Unless you want to create an exclusive Gigabit network, CAT5 cables will be fast enough, too. Most CAT5 cables are in fact CAT5e, which means they should be able to support Gigabit speeds anyway, but choose certified CAT5e cables just to be sure. CAT6 cables are more expensive and are worth buying only if you're cabling a whole house and want to futureproof your network.

Matt Smith

Notebooks and networks expert

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GRADWELL Centrex UK Unlimited

★★★★★

£18 a month inc VAT (£25 setup fee)

BEST BUY If you're looking for a VoIP line for your business, Gradwell's Centrex UK Unlimited should be of interest. The company isn't as well known as its main competitors, such as Vonage, but you get a lot for your money.

An initial £25 setup fee gets you a standard landline number. From then on you pay just £18 a month, which includes rental of a VoIP telephone that plugs into your router by Ethernet. We were provided with a Flexor 500 business phone. It supports caller ID and multiple phone lines, and integrates with Outlook, displaying the name of the caller as well as the number. However, the bundled software doesn't work with Windows Vista, so you'll need Windows XP.

What really makes Centrex UK Unlimited stick out is the range of services you get. As well as free UK landline calls (limited to 4,000 minutes per month), the call cost is



a competitive 1.76p per minute including VAT to 35 Western countries including the US and most of Europe (cheaper than Vonage's 2p per minute).

You can also make two calls simultaneously (two inbound, two outbound or one of each) and have up to ten internal extensions, so you can add new people to your company easily. Call quality was excellent using the Flexor 500 and it was impossible to tell the difference between this and a regular landline.

For small businesses that are just setting up, Centrex UK Unlimited is a well-priced service with tons of features, and it can expand to meet growing demand, too.

David Ludlow

SUMMARY

- ✓ Good value
- ✓ 10 internal extensions
- ✓ Make two simultaneous calls

VOIP SERVICE Free UK landline calls (limited to 4,000 minutes per month), includes telephone rental, choice of UK telephone number, 10 internal extensions, can make two calls at once
SUPPLIER Gradwell 01225 800800
DETAILS www.gradwell.com



BUFFALO WBM-R-G125

★★★★★

£48 inc VAT



New Draft-N routers may promise stunning speed, but they often fail to deliver. If you're unconvinced about upgrading, don't overlook the seemingly bog-standard 802.11g routers.

Take Buffalo's new WBM-R-G125, for instance. It's compact, inexpensive and has a built-in ADSL2+ modem for broadband connections up to 24Mbit/s and four 10/100Mbit/s ports at the rear. It also has Buffalo's AirStation One-Touch Secure System (AOSS). This lets you add laptops equipped with Buffalo's matching PC card to your wireless network quickly and easily.

The system works well. We installed the drivers and the ClientManager 3 software on a Windows XP laptop and were then prompted to click the AOSS button onscreen, as well as one on the front of the router. Less than two minutes after the security LED started flashing the PC card had a secure connection using WPA. It really couldn't be simpler.

Another bonus of using the WLI-CB-G54S PC card (which costs around £18) is that you can switch the router into High-Speed mode. This increases throughput from 802.11g's 54Mbit/s to 125Mbit/s. We were pleasantly surprised that this affordable combination outperformed some Draft-N routers.

The close-range performance was excellent and we saw little drop off in speed at long range. Even at 25m, the 3.9Mbit/s throughput we measured is enough for internet access. Centrino speeds were lower, as expected, but the connection was reliable throughout.

The router's web interface is intuitively arranged, although the cluttered design isn't the best we've seen. There's a basic Quality of Service menu plus DDNS services (including DynDNS.org), DMZ and port forwarding.

While the WBM-R-G125 isn't bursting with features, it has the essentials, a good turn of speed and AOSS. At this price, it's great value.

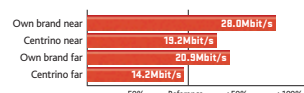
Jim Martin

SUMMARY

- ✓ Good wireless speed
- ✓ Inexpensive
- ✓ Automatic security

ADSL2+ MODEM ROUTER 802.11g (125Mbit/s), 4x 10/100 Ethernet ports, WAN Port (ADSL2+ modem), UPnP, QoS
PART CODE WBM-R-G125
SUPPLIER www.lambda-tek.com
DETAILS www.buffalotech.com

PERFORMANCE (see page 62)



ZYXEL HomePlug AV PLA-400

★★★★

£116 inc VAT

If your home isn't well suited to wireless networking, perhaps because it's too large or has particularly thick walls, powerline networking is an alternative. Unlike Devolo's Wireless extender (opposite) ZyXel's adaptors don't plug directly into power sockets. Instead, a small box houses the electronics, and each adaptor uses a standard two-pin power cable.

This makes them similar to Devolo's dLAN 200 AVdesk adaptors; they have a similar name because HomePlug AV is a standard. It means that both sets are capable, in theory, of 200Mbit/s, which is more than enough for AV use, and high-definition video in particular. In fact, working on the basis that HD video needs a bandwidth of around 20Mbit/s, you should be able to have ten different HD video streams playing through the PLA-400 simultaneously.

Like wireless networks, however, the actual speed of powerline adaptors is much lower than their headline figures. We tested the PLA-400s by transferring a 100MB file between two Windows XP-based PCs, connected by a router with Gigabit Ethernet ports. Disappointingly, no matter which power sockets we tried, we never saw more than 32Mbit/s. This is the same speed as Devolo's HomePlug AV devices, but significantly slower than the 59.4Mbit/s throughput we got from D-Link's DHP-301 (*What's New, Shopper* October 2007). At least it's enough for a single HD video stream.

Setting up the adaptors is easy. Once you've plugged them in they find each other and establish a connection, informing you of this by lighting their respective Link LEDs. A configuration utility included on CD enables you to choose your own encryption key to prevent any neighbours who use HomePlug kit being able to join your network.

The HomePlug AV PLA-400 isn't bad value, but D-Link's better-performing DHP-301 plugs are a better choice and they're around £10 cheaper, too.

Jim Martin

SUMMARY

- ✓ As fast as Draft-N WiFi
- ✓ Reliable performance
- ✗ Expensive

POWERLINE NETWORKING 2x 200Mbit/s HomePlug Ethernet adaptors
PART CODE 91-014-013007B
SUPPLIER www.broadbandbuyer.co.uk
DETAILS www.zyxel.co.uk

PERFORMANCE (see page 62)



BILLION BiPAC 7300GX

★★★★★

£112 inc VAT



There are times when losing your internet connection could be disastrous. If you're worried about the quality of your broadband connection, Billion's BiPAC 7300GX could be what you're looking for. As well as being a standard 802.11g wireless ADSL router, it has a CardBus slot, so you can install a 3G data card from T-Mobile or Vodafone as a backup.

You configure the router through its management webpage. There's no setup wizard to help you, but the status page has links to all the configuration pages you need (wireless, ADSL and 3G). You'll need your 3G provider's access point, username and password, but these are easy to find on Google.

The model we tested was an early sample, and we had to pick manually the broadband connection (3G or ADSL) we wanted to use. The final UK version will automatically switch from ADSL to 3G when there's a problem, and back when it's fixed.

The connection speed over 3G will depend on your service provider and the router's location, but we managed to get 443Kbit/s in an online speed test. This is plenty for sharing web browsing or email between a few PCs, but not so good for heavy file sharing.

The router's wireless performance was about average for 802.11g, although a throughput of 5.85Mbit/s at 25m shows that it provides a stable connection. The speeds that we got show that this router is ideal for internet connection sharing, but not for file sharing or streaming media.

Billion provides its usual range of in-depth features, including a packet filtering firewall and Quality of Service. Both options require a good deal of network knowledge, and beginners could struggle to understand them.

The 7300GX isn't an ideal general purpose router, but if you need a constant network connection or portable internet access, it's worth every penny.

David Ludlow

SUMMARY

- ✓ 3G internet backup
- ✓ Good wireless range
- ✗ Can be difficult to configure

ADSL/3G WIRELESS ROUTER 802.11g wireless router, ADSL2+ modem, CardBus slot, four-port 10/100 Ethernet switch
PART CODE BiPAC 7300GX
SUPPLIER Billion 020 8982 8228
DETAILS www.billion.co.uk

PERFORMANCE (see page 62)

